MORDIALLOC RAILWAY WATER TOWER

IMG 4872 1

IMG 4869

IMG 4870

IMG 5446

IMG 5441

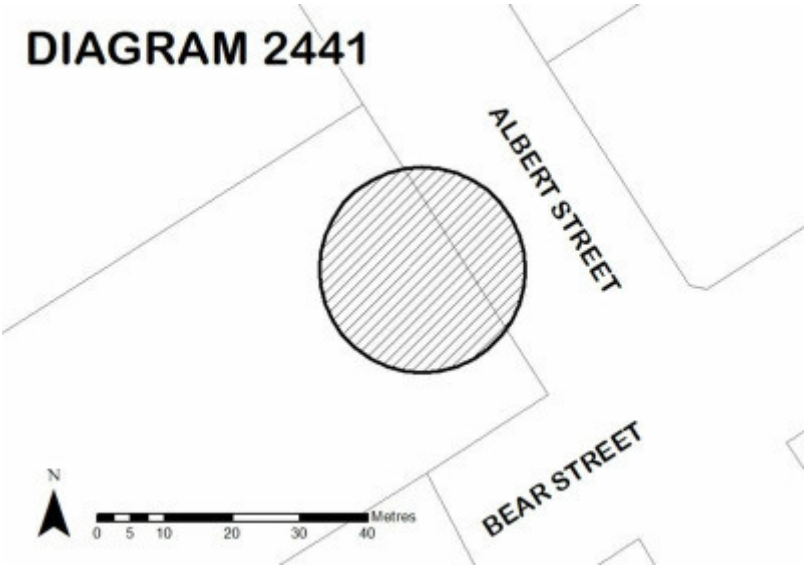
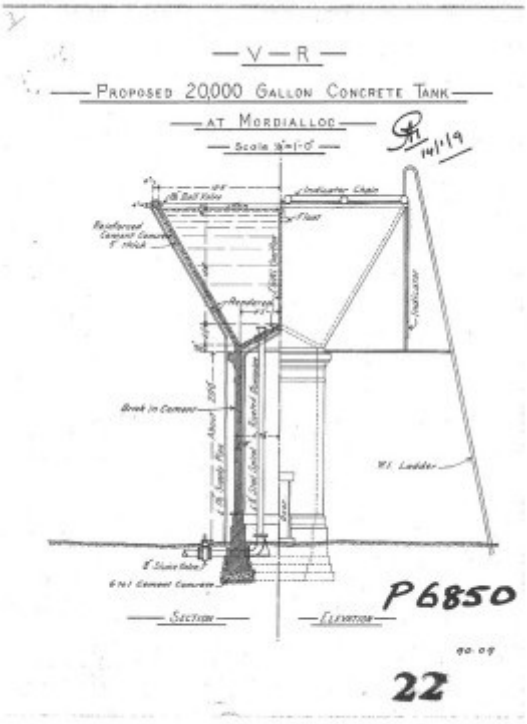


DIAGRAM 2441



1909 plan

Location

70 ALBERT STREET MORDIALLOC, KINGSTON CITY

Municipality

KINGSTON CITY

Level of significance

Registered

Victorian Heritage Register (VHR) Number

H2441

Heritage Overlay Numbers

HO92

VHR Registration

June 22, 2023

Heritage Listing

Statement of Significance

Last updated on - June 16, 2023

What is significant?
Mordialloc Railway Water Tower built by James Younger in a simplified Edwardian Style in c1910. It comprises an inverted cone constructed from metal-reinforced concrete sitting on a circular brick base.
How is it significant?
The Mordialloc Railway Water Tower is of historical significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:
Criterion A Importance to the course, or pattern, of Victoria's cultural history.
Criterion B Possession of uncommon, rare or endangered aspects of Victoria's cultural history.
Why is it significant?
The Mordialloc Railway Water Tower has a clear association with the rapid expansion of Victoria's railway network. The association is evident in the water tower for its clear illustration of the later stages of the steam-powered locomotive era before the electrification of the network in the interwar period. This expansion phase is of historical significance, having been key in the development of Victoria's railway. [Criterion A] The Mordialloc Railway Water Tower is a rare example of its type in existence in Victoria and is likely to be one of the last water towers of any type within the entire suburban rail network. Its striking form was not widely replicated in Victoria. The use of metal-reinforced concrete in the construction of the cone represents a relatively early and novel use of this material. [Criterion B]

Permit Exemptions

General Exemptions:

General exemptions apply to all places and objects included in the Victorian Heritage Register (VHR). General exemptions have been designed to allow everyday activities, maintenance and changes to your property, which don't harm its cultural heritage significance, to proceed without the need to obtain approvals under the Heritage Act 2017.

Places of worship: In some circumstances, you can alter a place of worship to accommodate religious practices without a permit, but you must notify the Executive Director of Heritage Victoria before you start the works or activities at least 20 business days before the works or activities are to commence.

Subdivision/consolidation: Permit exemptions exist for some subdivisions and consolidations. If the subdivision or consolidation is in accordance with a planning permit granted under Part 4 of the *Planning and Environment Act 1987* and the application for the planning permit was referred to the Executive Director of Heritage Victoria as a determining referral authority, a permit is not required.

Specific exemptions may also apply to your registered place or object. If applicable, these are listed below. Specific exemptions are tailored to the conservation and management needs of an individual registered place or object and set out works and activities that are exempt from the requirements of a permit. Specific exemptions prevail if they conflict with general exemptions.

Find out more about heritage permit exemptions here.

Specific Exemptions:

Specific Exemptions

The works and activities below are not considered to cause harm to the cultural heritage significance of the Donald Shire Officessubject to the following guidelines and conditions:

Guidelines

1. Where there is an inconsistency between permit exemptions specific to the registered place or object ('specific exemptions') established in accordance with either section 49(3) or section 92(3) of the Act and general exemptions established in accordance with section 92(1) of the Act specific exemptions will prevail to the extent of any inconsistency.

2. In specific exemptions, words have the same meaning as in the Act, unless otherwise indicated. Where there is an inconsistency between specific exemptions and the Act, the Act will prevail to the extent of any inconsistency.

3. Nothing in specific exemptions obviates the responsibility of a proponent to obtain the consent of the owner of the registered place or object, or if the registered place or object is situated on Crown Land the land manager as defined in the *Crown Land (Reserves) Act 1978*, prior to undertaking works or activities in accordance with specific exemptions.

4. If a Cultural Heritage Management Plan in accordance with the *Aboriginal Heritage Act 2006* is required for works covered by specific exemptions, specific exemptions will apply only if the Cultural Heritage Management Plan has been approved prior to works or activities commencing. Where there is an inconsistency between specific exemptions and a Cultural Heritage Management Plan for the relevant works and activities, Heritage Victoria must be contacted for advice on the appropriate approval pathway.

5. Specific exemptions do not constitute approvals, authorisations or exemptions under any other legislation, Local Government, State Government or Commonwealth Government requirements, including but not limited to the *Planning and Environment Act 1987*, the *Aboriginal Heritage Act 2006*, and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). Nothing in this declaration exempts owners or their agents from the responsibility to obtain relevant planning, building or environmental approvals from the responsible authority where applicable.

6. Care should be taken when working with heritage buildings and objects, as historic fabric may contain dangerous and poisonous materials (for example lead paint and asbestos). Appropriate personal protective equipment should be worn at all times. If you are unsure, seek advice from a qualified heritage architect, heritage consultant or local Council heritage advisor.

7. The presence of unsafe materials (for example asbestos, lead paint etc) at a registered place or object does not automatically exempt remedial works or activities in accordance with this category. Approvals under Part 5 of the Act must be obtained to undertake works or activities that are not expressly exempted by the below specific exemptions.

8. All works should be informed by a Conservation Management Plan prepared for the place or object. The Executive Director is not bound by any Conservation Management Plan, and permits still must be obtained for works suggested in any Conservation Management Plan.

Conditions

1. All works or activities permitted under specific exemptions must be planned and carried out in a manner which prevents harm to the registered place or object. Harm includes moving, removing or damaging any part of the registered place or object that contributes to its cultural heritage significance.

2. If during the carrying out of works or activities in accordance with specific exemptions original or previously hidden or inaccessible details of the registered place are revealed relating to its cultural heritage significance,

including but not limited to historical archaeological remains, such as features, deposits or artefacts, then works must cease and Heritage Victoria notified as soon as possible.

3. If during the carrying out of works or activities in accordance with specific exemptions any Aboriginal cultural heritage is discovered or exposed at any time, all works must cease and the Secretary (as defined in the *Aboriginal Heritage Act 2006*) must be contacted immediately to ascertain requirements under the *Aboriginal Heritage Act 2006*.

4. If during the carrying out of works or activities in accordance with specific exemptions any munitions or other potentially explosive artefacts are discovered, Victoria Police is to be immediately alerted and the site is to be immediately cleared of all personnel.

5. If during the carrying out of works or activities in accordance with specific exemptions any suspected human remains are found the works or activities must cease. The remains must be left in place and protected from harm or damage. Victoria Police and the State Coroner's Office must be notified immediately. If there are reasonable grounds to believe that the remains are Aboriginal, the State Emergency Control Centre must be immediately notified on 1300 888 544, and, as required under s.17(3)(b) of the *Aboriginal Heritage Act 2006*, all details about the location and nature of the human remains must be provided to the Secretary (as defined in the *Aboriginal Heritage Act 2006*.

Exempt works and activities

1. Ground level works to maintain, reconfigure or improve the Mordialloc Railway Station Carpark including the repair or resealing of the carpark surface; the repair, removal, installation or maintenance of kerbing, bollards, speed humps, wheel stops and boom gates; the maintenance, removal or installation of plantings and landscaping; the repair, removal or installation of directional signage and line marking; and the repair, removal or installation of lighting.

2. The repair, resurfacing or replacement of footpaths, nature strips, roads and kerbing and the installation, repair or removal of regulatory signs, warning signs, traffic lights, and street signs.

3. The removal, repair or installation of underground services, utilities and drains within the road reservation provided that the surface is returned to its former appearance upon completion.

Theme

3. Connecting Victorians by transport and communications

Construction dates	1910,
Heritage Act Categories	Registered place,
Hermes Number	47096
Property Number	

History

Melbourne's metropolitan railway system

The opening of a steam railway between Flinders Street and Sandridge (Port Melbourne) by the Hobson's Bay Railway Company in 1854 was the first development in a steady expansion of the rail network across Victoria through the second half of the nineteenth century.

This expansion tracked the rapid population growth of Melbourne, spurred by the gold rush, and the establishment of an ever-growing number of suburbs radiating out from central Melbourne. Speculators and developers recognised the value of rail infrastructure in boosting land values, and many of these early railways were funded through private equity with mixed financial success[1]. The Government purchase of the Melbourne & Hobsons Bay United Railway Company in 1878 marked the end of privately owned suburban railways in Melbourne[2] and set the scene for the rapid expansion of the railway network across the state during the 'Octopus Acts' era[3].

Thomas Bent and the development of the Frankston railway line

Growing recognition of the role of railways in supporting and encouraging the development of Melbourne's outer suburbs saw the expansion of the network to the south of Melbourne in the last decades of the nineteenth century during the so-called 'Octopus Act' era.

A line to Frankston was identified as an effective way to encourage development at key communities to Melbourne's south such as Bentleigh, Moorabbin, Cheltenham and Mentone[4]. The first half of the route to Frankston consisted of a line between Caulfield and Mordialloc with other stations located at Glen Huntly, East Brighton (now Bentleigh), North Road (Ormond), South Brighton (Moorabbin), Highett's Road (Highett), Cheltenham, and Balcombe's Road (Mentone). The official opening of the line to Mordialloc in December 1881 was a lavish event attended by a number of prominent politicians including Thomas Bent, Minister for Railways (later Premier of Victoria), the Solicitor General, and the Minister for Agriculture[5].

As the responsible Minister, Bent played a prominent and direct role in the development of the line. There was much speculation at the time (though never proved) that Bent secretly influenced the final alignment of the rail corridor between Caulfield and Mordialloc to benefit wealthy landowners in his Brighton electorate[6]. Bent's intervention to change the design of the new stations servicing the route is more openly documented. The original station building designs were based on the standard timber framed station buildings used on the 'Light Lines' commissioned by Robert Gray Ford, Engineer-in-Chief of the Victorian Railways. Bent rejected this design outright and requested the removal of the station master's quarters to reduce costs.

S E Brindley of the Department of Education was commissioned by Bent to reconfigure the designs. Brindley put forward a timber-framed station building incorporating elements such as a booking office and lobby, luggage room, and waiting rooms, but lacking any accommodation for the station master. Brindley's standardized design was finalised in 1882 and subsequently constructed at Glenhuntly, Bentleigh, Ormond, Moorabbin, Highett, Cheltenham, Mordialloc, and Frankston stations[7]. This group of stations represented the first use of a standardized design for a suburban railway line, an approach that was subsequently replicated at other locations on the suburban network[8].

Despite the significant engineering challenge of building a railway that needed to traverse the complex of swamps and creeks between Mordialloc and Frankston, the line was quickly extended to Frankston in August 1882 to create the present-day Frankston Line[9]. Extension of the line to Frankston opened up land for development and provided a boost to the farming communities around Carrum. The duplication of the line in 1888 further boosted the appeal to developers in what had previously been a relatively inaccessible area to the city's south. It similarly provided an opportunity to expand the sand mining industry, and several sidings were opened to support these activities between 1890 and 1953[10].

The original railway station at Mordialloc

Mordialloc was originally established as a fishing village around the creek of the same name, and later became a popular picnicking ground.[11] The opening of the railway line had the added benefit of providing a cost-effective

means by which fishers and other primary producers could get their produce to market in Melbourne.

The changes to the standardised station designs requested by Bent meant that the main (upside) station building at Mordialloc was not completed until 1882, well after the line's official opening in December 1881.[12] The contract for construction was awarded to W Chaffer in 1882 for a total of £749.[13] The upside station building directly reflected the standardised design, based around a symmetrical plan consisting of a pair of gables housing the booking hall and passenger waiting areas. Other key elements reflected the High-Victorian style popular during this period including the use of slate roofing, and application of a range of decorative features such as cast-iron finials, bargeboards, cast-iron verandah brackets, king post motifs in the end gables, and polychrome brick chimneys.[14] A lamp shed was constructed along the platform further to the north of the main building.

A subsequent extension to the upside building was undertaken in a less decorative Late-Victorian style in 1887 by S Young for a total of £484.[15] This addition provided enhanced passenger facilities and extended the main station southwards along the platform towards the Bear Street level crossing.[16]

Expansion of the Mordialloc railway station complex

Burgeoning patronage on the Frankston line – partly spurred by infrastructure improvements such as the duplication of the line through to Frankston in 1888[17] and the upgrading of rail bridges spanning the Nepean Highway[18] and Mordialloc Creek[19] – led to incremental additions to the station complex during the late-nineteenth through to the early decades of the twentieth century.

At its peak the complex included a range of ancillary structures to support both passenger and freight operations. A stationmaster's house was constructed at the north-eastern corner of the station reserve in c1887 at a cost of £476[20], despite Bent's original cost-saving measure that led to the removal of this feature from the standardised design. Other structures constructed during this expansion phase included: a large goods yard accessed via a dedicated siding and crossing featuring a goods shed, locomotive shed, and turntable; crossing gates and guard house; pedestrian underpass linking the upside and downside platforms; and signalling improvements incorporating a signal box (1911) located at the southern end of the upside platform[21].

Of particular note are two structures constructed during the Edwardian period that still stand today: the concrete and brick water tower, and the downside passenger shelter. The 20,000-gallon water tower was constructed c1910 to the east of the downside in a simplified Edwardian style with no applied decoration.

The downside passenger shelter is a simple timber gable structure of Federation/Edwardian design (date unknown) that may have replaced an earlier Victorian-era building. It consists of an open waiting room with bench seating, and smaller office space accessed from a door located on the platform. Noticeably smaller than the upside platform building, the structure exhibits a number of decorative features characteristic of its period, including a dado rail, timber slatting in the gable ends, and the use of pressed metal panels to imitate roughcast render.

Application of new technology: reinforced concrete water tower

Originally the terminus of the line from Caulfield, Mordialloc Railway Station's proximity to Mordialloc Creek made it an ideal location for the resupply of steam trains. The sizeable length of the eventual Frankston line (completed by 1882), and the lack of a reliable source of fresh water at Frankston, necessitated a number of stopping points along the route to replenish passenger and goods trains. The water tower, located to the east of the downside platform, was constructed in c1910 to cater for this purpose and was accessed via a dedicated goods siding (now commuter car park). The tower was constructed by James Younger at a cost of £428[22] in a simplified Edwardian style and comprises a metal-reinforced concrete inverted cone with a capacity to store 20,000 gallons

of water sitting on top of a circular brick base.

Prior to the erection of the current tower, several smaller cast iron tanks serviced the siding. Cast iron tanks were commonly used across the rail network in the nineteenth century as they were cost-effective, reliable, and easy to manufacture. The decision to make use of a metal-reinforced concrete tank in place of cast iron therefore represented a conspicuous shift towards a new form of water storage technology.[23]

Metal-reinforced concrete was still a relatively new material at the time of the tower's construction. It was a significant improvement over the use of mass concrete that had until that time proved popular in large-scale structures such as dam walls and bridges. In Australia the use of metal-reinforced concrete in construction projects began to increase in the late-nineteenth century. Several local firms and engineers acquired the patent of Monier, the leading French firm that pioneered the technology, including Carter Gummow & Co and Sir John Monash in Victoria.[24] By the first decades of the twentieth century reinforced concrete was starting to gain wider acceptance in a range of structures including water tanks, sewage and freshwater pipes, warehouses, and bridges.[25] As such, Mordialloc Railway Water Tower demonstrates the Victorian Railway Department embracing up-to-date concrete technology for water storage purposes.

The electrification of the entire Frankston line in 1922 marked the effective end of steam passenger services to Mordialloc. Consequently, much of the infrastructure required to support the maintenance and resupply of steam locomotives became obsolete. This was a pattern repeated across metropolitan Melbourne and, eventually, regional Victoria as diesel locomotives replaced steam. Steam related infrastructure was gradually removed from railway complexes, particularly in metropolitan Melbourne.

Modernisation of Mordialloc Railway Station Complex

Incremental modernisation and rationalisation over successive decades resulted in large-scale changes to the station precinct. Perhaps the most significant change was the conversion of the goods yard to a stabling yard that resulted in the removal of the engine and goods sheds, turntable, and metal water tanks. The goods siding to the east of the downside passenger platform was also replaced by the current commuter car park. The Edwardian concrete water tank is therefore a notable survivor from this phase of modernisation. It is noted that Younger also built a similar concrete tank in Dandenong around the same time. The Dandenong tank was removed in the 1960s, making the Mordialloc Water Tower the last one of its kind in metropolitan Melbourne.

By the 1980s the upgrading of signalling and level crossing technology resulted in the gradual removal of the bulk of the structures within the Mordialloc station precinct including the stationmaster's house, signal box, crossing gates, and lamp shed, leaving the current arrangement of upside and downside passenger buildings, and concrete water tank set on the eastern edge of the precinct.

[1] Robert Lee, *The Railways of Victoria 1854-2004*, 2007, pp9-22
[2] Ibid p78
[3] Ibid p93
[4] Living Histories, *City of Kingston Heritage Study Stage 0ne Report*, 2000, p38
[5] Kingston Historical Society, *Official Opening of the Mordialloc Railway Station*, available at: https://localhistory.kingston.vic.gov.au/articles/310, viewed 21 June 2022
[6] Kingston Historical Society, *Establishing a Railway Line to Mordialloc*, available at: https://localhistory.kingston.vic.gov.au/articles/329, viewed 18 August 2022
[7] Andrew Ward, *The Story of Stations: The Architecture of Victoria's Railways in the Nineteenth Century*, 2019,

p204-205
[8] A. Ward and A. Donnelly, *Victoria's Railway Stations: An Architectural Survey – Volume 3: The Great Railway Age 1880-1900*, 1982, p90
[9] Living Histories, *City of Kingston Heritage Study Stage 0ne Report*, 2000, p39
[10] Ibid, p42
[11] Kingston Historical Society, *Early Mordialloc*, available at: https://localhistory.kingston.vic.gov.au/articles/228, viewed 21 June 2022
[12] A temporary timber building was provided to the completed platforms to enable the official opening of the line in December 1881
[13] *Victorian Government Gazette*, No.16, 17 February 1882, p468
[14] A. Ward and A. Donnelly, *Victoria's Railway Stations: An Architectural Survey – Volume 3: The Great Railway Age 1880-1900*, 1982, pp89-90
[15] *Victorian Government Gazette*, No.48, 3 June 1887, p1501
[16] A. Ward and A. Donnelly, *Victoria's Railway Stations: An Architectural Survey – Volume 3: The Great Railway Age 1880-1900*, 1982, p130
[17] *Victorian Government Gazette*, No.38, 27 April 1888, p1238
[18] Kingston Historical Society, *Railway Bridge at Mordialloc: A Death Trap*, available at: https://localhistory.kingston.vic.gov.au/articles/642, viewed 25 August 2022
[19] *New Railway Bridge at Mordialloc*, The Age, Tuesday 24 March 1896, p7
[20] *Victorian Government Gazette*, No.76, 12 August 1887, p2391
[21] Vicsig website 2022, *Mordialloc Station*, available at: https://vicsig.net/infrastructure/location/Mordialloc, accessed 25 August 2022
[22] *Victorian Government Gazette*, No.146, 16 November 1910, p5123
[23] Frank McGuire, *Mordialloc: The Early Days*, 1985, pp49-50
[24] Miles Lewis, *200 years of concrete in Australia*, c1988, pp10-11.
[25] Ibid, pp. 18-19.

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Robert Lee, *The Railways of Victoria 1854-2004*, Melbourne University Press, 2007

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Miles Lewis (ed), *200 Years of Concrete in Australia*, Concrete Institute of Australia, 1988

Frank McGuire, *Mordialloc: The Early Days*, Argyle Press, 1985

Bryce Raworth, *City of Kingston Heritage Study Stage 2 (Citations)*, 2001

A. Ward and A. Donnelly, *Victoria's Railway Stations: An Architectural Survey – Volume 3: The Great Railway Age 1880-1900*, 1982

Andrew Ward, *The Story of Stations: The Architecture of Victoria's Railways in the Nineteenth Century*, Australian Railway Historical Society Victorian Division, 2019

Graham Whitehead and Leo Gamble, *By the Creek: A Mordialloc History*, City of Kingston, 2014

Assessment Against Criteria

Criterion

The Mordialloc Railway Water Tower is of historical significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:

Criterion A
Importance to the course, or pattern, of Victoria's cultural history.

Criterion B
Possession of uncommon, rare or endangered aspects of Victoria's cultural history.

Extent of Registration

NOTICE OF REGISTRATION

As Executive Director for the purpose of the **Heritage Act 2017**, I give notice under section 53 that the Victorian Heritage Register is amended by including a place in the Heritage Register:

Number: H2441
Category: Registered Place
Name: Mordialloc Railway Water Tower
Location: 70 Albert Street, Mordialloc
Municipality: Kingston City

All of the place shown hatched on Diagram 2441 encompassing part of Lot 1 on Title Plan 918448 and part of the Albert Street road reserve for a distance of 10 metres from the base of the tower.

Dated 22 June 2023

STEVEN AVERY
Executive Director